Claims

1. A head drum assembly for a tape player/recorder comprising:

a rotary drum, which rotatably supports a magnetic head for recording and reproducing information by scanning a running magnetic tape;

a fixed drum press-fitted onto the lower part of a shaft engaged in a central axial bore of the rotary drum parallel to the rotary drum;

a motor stator provided in the fixed drum; and

a motor rotor provided opposite to the motor stator, the motor rotor being connected to the rotary drum, and a rotor case of the motor rotor being directly bonded to an outer circumferential surface of the rotary drum.

2. The head drum assembly for a tape player/recorder according to claim 1, wherein the motor stator comprises:

a magnetic yoke; and

a stator coil, wherein a substantially constant first gap is maintained between the magnetic yoke and stator coil.

3. The head drum assembly for a tape player/recorder according to claim 1, wherein a substantially constant second gap is maintained between the motor rotor and motor stator.

4. The head drum assembly for a tape player/recorder according to claim 3, wherein the substantially constant second gap is in the range of 0.3 mm to 0.4 mm.

5. The head drum assembly for a tape player/recorder according to claim 3, wherein the substantially constant second gap is about 0.36 mm.

6. The head drum assembly for a tape player/recorder according to claim 2, wherein the substantially constant first gap is within the range of 0 to 0.03 mm.

7. The head drum assembly for a tape player/recorder according to claim 2, further comprising a rotor magnet, and wherein a magnetizing force of the rotor magnet is

controlled.

8. The head drum assembly for a tape player/recorder according to claim 7, wherein the magnetic force of the rotor magnet is controlled to be lower than a conventional motor stator.

9. A method for manufacturing a head drum assembly for a tape player/recorder comprising:

press fitting a fixed drum onto a lower part of a shaft engaged in a central axial bore of a rotary drum parallel to the rotary drum, wherein the fixed drum comprises a motor stator, and wherein the rotary drum rotatably supports a magnetic head for recording and reproducing information by scanning a running magnetic tape; and

connecting a motor rotor to the rotary drum, wherein a rotor case of the motor rotor is directly bonded to an outer circumferential surface of the rotary drum.

10. The method for manufacturing a head drum assembly for a tape player/recorder according to claim 9, wherein the motor stator comprises:

a magnetic yoke; and

a stator coil, wherein a substantially constant first gap is maintained between the magnetic yoke and stator coil.

11. The method for manufacturing a head drum assembly for a tape player/recorder according to claim 9, wherein a substantially constant second gap is maintained between the motor rotor and motor stator.

12. The method for manufacturing a head drum assembly for a tape player/recorder according to claim 11, wherein the substantially constant second gap is in the range of 0.3 mm to 0.4 mm.

13. The method for manufacturing a head drum assembly for a tape player/recorder according to claim 11, wherein the substantially constant second gap G2 is about 0.36 mm.

14. The method for manufacturing a head drum assembly for a tape player/recorder according to claim 10, wherein the substantially constant first gap is within the range of 0 to 0.03 mm.

15. The method for manufacturing a head drum assembly for a tape player/recorder according to claim 10, wherein the head drum assembly further comprises a rotor magnet, and wherein a magnetizing force of the rotor magnet is controlled.

16. The method for manufacturing a head drum assembly for a tape player/recorder according to claim 15, wherein the magnetic force of the rotor magnet is controlled to be lower than a conventional motor stator.